VARIANCE REQUEST

STATE OF UTAH
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
(801) 536-4000

PURPOSE: This form is to be used by any entity that is requesting a variance from either the state air rules (R307 series) or an air permit requirement (permit being either an Operating Permit or an Approval Order). See Utah Code 19-2-113 or Utah Administrative Code R307-102-4

INSTRUCTIONS: Complete each item below; each item must be addressed. Use additional pages if necessary. If there is a change in any of the information listed below, report the changes to the Utah Division of Air Quality immediately. You will be notified of the date, place, and time of the hearing or the determination made by the Executive Secretary.

Submit form to: **Executive Secretary**
Utah Division of Air Quality
150 North 1950 West
PO Box 144820
Salt Lake City, Utah, 84114-4820
Phone: 801-536-4000

Brigham Young University
Business Name

Street Address (Location of Business)

Provo **Utah**
City **County**

84602
Zip Code

P.O. Box 28106
Mailing Address

Provo **UT**
City **State**

84602
Zip Code

Craig Barrus
Contact - Name of the person authorized to receive notices
(801) 422-5434
Contact Telephone Number

Applicant is:
( ) Individual
( ) Partnership
( ) Corporation
( ) Government
(X) Other Entity

List names and addresses of all partners, officers, or other persons in control.

1. (X) Initial Variance ( ) Renewal

2. The purpose of variance request (check one):

   a. ( ) no practicable means known or available for the adequate prevention, abatement, or control of the air pollution involved.

   b. ( ) compliance with the requirements from which variance is sought will require that measures, because of their extent of cost, must be spread over a long period of time.

   c. (X) to relieve or prevent hardship of a kind other than provided for in 2.a or 2.b.

3. Describe the business or activity for which the variance is requested. List all past, present, and future businesses and activities.

Higher Education – Private Instruction

4. . Describe the emission unit or process equipment or other units/equipment involved in the request.

None

5. State the rules or permit conditions (identify whether Approval Order or Title V) from which the applicant seeks relief.

Visible opacity will be less than 20% at the source and 10% at the property boundaries (R307-309-5)

6. State the specific time period(s) for which the variance is requested.

December 20, 2006, The implosion will take less than 60 seconds. Visable emissions above the applicable standard will depend to an extent on ambient conditions but are estimated to be below allowable limits within ten minutes. This is based on information provided by Iowa State concerning the explosive demolition of two residence halls. Their estimate is as follows: “Dust may linger in the immediate area for 5 to 10 minutes following the implosion. The extent the dust will travel depends on weather conditions and wind speed. Given the large vacant area surrounding the Towers, the majority of the dust will remain on the site”.

Note the Iowa demolition involved two structures both taller and larger than the structures at Brigham Young Unversity.

7. State why compliance with the rule or approval order from which variance is sought would produce serious hardship without equal or greater benefits to the public. If financial hardship, include itemized and total costs of compliance.

The implosion will reduce the time exposure to the most hazardous part of the demolition. That hazard involves the risks associated with potential and kinetic energy possessed by falling debris. The risk of injury is directly proportional to the time exposure which will be less than one minute with explosive demolition and over three weeks for mechanical demolition. In addition, the explosive demolition will permit all of the most hazardous elements of the building removal to occur over the Christmas holidays while our student population will not be exposed to either the dust or the potential falling debris.

An additional consideration is noise caused by mechanical demolition would disrupt students’ studying, especially for finals. Demolition is in the middle of five other residence high rise dormitories.

8. List all possible alternatives in lieu of obtaining a variance. Discuss the advantages and disadvantages of each alternative. A cost estimate for each alternative must be included.

Mechanical demolition using a wrecking ball operated from a tall crane. The wrecking ball approach tends to cause the same total level of air pollution as the explosive demolition (see Iowa FAQ http://www.fpm.iastate.edu/Knapp-Storms/faq.asp “No more dust will be created

by implosion than would be by conventional demolition (crane/wrecking ball). The advantage to implosion is that the dust will be created during one specific short-term event. Therefore, appropriate precautions, such as covering heating and cooling systems and closing doors/windows, can be employed to protect surrounding areas from dust. If the two Towers were demolished conventionally, the process would take much longer to perform and these precautions would not be feasible for that extended period of time.")

As stated in #7 above the explosive demolition also minimizes the time/exposure to falling debris as well as the total population exposure to noise during the process. Falling being removed from ground level.

9. State the advantages and disadvantages to nearby residents if the variance is granted.

Students will be able to prepare for finals with minimal disruption, and continue with their studies.
There will be less likelihood of a permiter excursion by curious onlookers resulting in injury.
The total release of airborne particulates will over a much shorter time period (for all potentially exposed populations.)

10. State how the applicant will reduce excess emissions to the maximum extent feasible during the period the variance is in effect.

All furniture has been removed from the buildings.
All asbestos has been removed from the buildings.
A fugitive emission control plan will be followed for removing the debris following the demolition.

11. State the facts showing why operations under such variance are not likely to cause a nuisance, as defined in 76-10-803, Utah Code Annotated.

It would be more of a nuisance to mechanically demolish buildings.

12. The source is located in: (X) a non-attainment area
( ) an attainment area

a. If located in a non-attainment area, will emissions resulting from approval of the variance cause a new violation of the National Ambient Air Quality Standards? Include all supporting data and calculations, such as emission estimates and modeling data. Give the exact location of the activity or business for which variance is sought.

Calculations for dust emissions associated with the Iowa State demolition are attached.

b. If located in an attainment area, give the exact location of the activity or business for which variance is sought. Will emissions resulting from the approval of the variance cause a new violation of the National Ambient Air Quality Standards? Address the impact on increment consumption for the area and also address the possible impact on Class I areas.

N/A

13. Is the variance request considered an emergency situation? ( ) Yes (X) No

If yes, explain in detail.

14. Are other regulatory agencies or permit authorities involved in the variance request?
( ) Yes (X) No

If yes, state the agency name(s), contact person(s), phone number(s), and reason for their involvement.

_____ 11/22/2006

Signature Date

Craig Barrus

Name

Assistant Director of Construction

Title

EXCESS EMISSIONS CALCULATIONS

Business Name: _____

The following emission information must be provided by the applicant and filed with the variance application. Include a description of the methodology used to calculate emissions.

Measured emissions from a similar (but somewhat larger) demolition have been included.